Amendments to the Specification:

Please replace paragraph [0072] with the following amended paragraph:

[0072] A problem in a residential building component will appear as an anomaly in a temperature profile. An anomaly is any deviation from the normal characteristics of a specific type of residential building component. FIGS. 4, 13 A-E and 15 – 31 show a series of temperature profiles and temperature profile anomalies. A temperature profile anomaly is indicative of a possible problem with the residential building component. These building problems include but are not limited to the following: structure, insulation, moisture, electrical hot spots, water leakage, unwanted pests such as termite, mice, and rats, and air duct leakage. The term residential building components include elements of a building, such as walls, ceilings, windows, plumbing fixtures, etc. The residential building component can be an exterior component, such as exterior wall (wood, bricks, stucco, EIFS or vinyl siding), eaves, fascias and interior surface of a pitched roof. Similarly, the residential building component can be the electrical system. Additionally, the residential building component can be an interior structure, such as insulation, wiring, air duct, and finished surfaces.

Please replace paragraph [0086] with the following amended paragraph:

[0086] More specifically, this process relates to an inspection of an exterior residential building component. The exterior residential building component is selected from the group consisting of: wall, fascia, and eave. The process of obtaining a temperature profile of an outside residential component implies that a thermal window exists, in that, a useful temperature profile could not be obtained without thermal differences between components. The next step involves obtaining a temperature profile of the exterior residential building components. Then, a temperature profile is recorded on a digital recording device. The digital recording is reviewed to detect any thermal anomalies. Now referring to FIG. 4A, an EFIS exterior wall is shown with a regular video photograph. In FIG. 4B, a temperature profile, taken in the morning after sunrise when the thermal window has just begun to open shows a warm spot ~~1~~ 15 which in indicative of moisture within an EFIS wall.

Please replace paragraph [0087] with the following paragraph:

[0087] In FIG. 5A, and 5B, temperature profiles, taken when moisture is allowed to evaporate shows anomalies as dark spots ~~2~~ 21 and ~~3~~ 23 under the vinyl siding. This moisture is not visible to the human eye. These anomalies ~~2~~ 21 and ~~3~~ 23 are indicative of the presence of moisture under the vinyl siding.

Please replace paragraph [0088] with the following paragraph:

[0088] Now referring to FIG. 6, a temperature profile, taken in the morning after sunrise of an eave shows a number of anomalies. Anomaly ~~4~~ 24 and ~~5~~ 25 are indicative of current structural deformations due to past infiltration of water (dried) and anomaly ~~6~~ 26 is indicative of the presence of moisture.

Please replace paragraph [0090] with the following paragraph:

[0090] FIGS. 8 and 9 show temperature profile taken at noon. In FIG. 8, no thermal anomalies are present, while in FIG. 9, a thermal anomaly ~~8~~ 28 shows a cracked brick wall. This temperature profile shows as a thermal anomaly because moisture is in the crack in the wall.

Please replace paragraph [0091] with the following paragraph:

[0091] Roofs (Pitched Roof) Applications-In the heat of the day, the thermal load on a roof can be quite striking to view through an infrared detector. Anomalies show up as dark shadows against a bright background. More specifically, referring to FIGS. 10A and 10B, thermal anomalies ~~9~~ 29 and ~~10~~ 30 are shown as dark spots. This type of thermal anomaly is indicative of water damage to a roof. These types of thermal anomalies are present for two to three days after rain during the summer time and up to few weeks in the cold season. This period is considered the thermal window for this application. In the present method, a pitched roof is defined as a roof having a slope ranging greater than a rise of 1 by 12 inches.

Please replace paragraph [0093] with the following paragraph:

This invention can be applied to pitched roofs to inspect the condition of a residential roof. More specifically, in FIG. 10C the source of a leak can be traced by assessing the thermal anomaly ~~11~~

31. The leak can be followed from left to right to find the leak shown as the dark spot. Additionally, this method can also be used to detect structural deformation. The thermal anomaly shown as the white irregular spot ~~12~~ 14 is indicative of a puncture in the roof decking material with the shingles covering over the puncture. This method can also be used to detect structural damage such as cracks. The temperature profile is recorded on a digital recording device 2.

Please replace paragraph [0101] with the following paragraph:

[0101] Referring to FIGS. 11, 12, 13A and 13B, various temperature profiles of electrical components are shown. These temperature profiles are made as part of a process to detect a potential problem with an electrical circuit of a residential building. In this method, the first step is to turn on substantially all of the light switches in the residential building. Then, a temperature profile, such as those shown in FIGS. 11, 12, 13A and 13B is obtained. Each of the temperature profiles is assessed for an anomaly. For example, FIG. 11, shows an on/off switch 80 and a GFCI outlet ~~14~~ 32 that are normal. FIG. 12, is a temperature profile of a dimmer switcher that shows an anomaly ~~15~~ 33 indicative of a very hot dimmer switch. Similarly, FIGS. 13A and 13B show thermal anomalies ~~16-18~~ 34 - 36 indicative of heavily loaded electrical circuits. FIGS. 13C-E show a thermal anomaly indicative of a hot electrical wire 37 - 39. When a thermal anomaly is detected, the next step, in the preferred embodiment, is to direct the designated entity to consult with a licensed electrician.

Please replace paragraph [0108] with the following paragraph:

[0108] Now referring to FIGS. 16 and 17, 2x4 studs ~~20~~ 40 and ~~21~~ 42 appear as warm in uninsulated or very poorly insulated wall (left half of the wall) during the winter season. This is due to the fact that 2x4 wood stud now is a relatively better insulator as compared to uninsulated air space, as a result, the 2x4 stud looses relatively less heat than the uninsulated air space (from the indoor to the outdoor). The right portion ~~19~~ 41 and ~~22~~ 43 appears to be insulated.

Please replace paragraph [0111] with the following paragraph:

[0111] (2) Plumbing-Hidden plumbing leaks can pinpoint within finished surfaces utilizing the thermal camera in cases where visual inspection was not possible. In FIG. 20A, a temperature

profile is obtained for plumbing fixtures after the thermal window is created. The term plumbing fixture can include the plumbing fixture itself or associated piping. The temperature profile is recorded on a digital recording device and reviewed for a thermal anomaly. The temperature profile shown in FIG. 20A shows anomalies ~~23~~ 44 and ~~24~~ 45, which are indicative of a moisture leak behind the wall. FIG. 20B shows an air conditioning Freon pipes with a darker portion ~~25~~ 46 indicative of low pressure (cold) return pipe. The temperature profile of FIG. 20B is a normal profile for an air conditioning duct.

Please replace paragraph [0114] with the following paragraph:

[0114] Condensation can also occur on interior ceiling surface as shown in FIG. 21A and 21B. FIG. 21A was taken 4 feet away from the ceiling. The anomaly ~~26~~ 47 is indicative of moisture on the ceiling. The temperature profile shown in FIG. 21B was taken 15 feet away from the same ceiling shown in FIG. 21A. The anomaly ~~27~~ 48 is indicative of moisture in the ceiling.

Please replace paragraph [0115] with the following paragraph:

[0115] (4) Moisture in Air Duct-Additionally, FIGS. 21C and 21D show anomalies ~~28~~ - ~~30~~ 49 - 51 which are indicative of moisture in an air duct. This happens most often when there is no insulation in that particular section of the ceiling due to poor workmanship or due to rodent activities plus the occupant of the house has the lifestyle of generating high level of moisture with inadequate ventilation during the winter season. The uninsulated ceiling is closer to the cold outdoor temperature. When the high level moisture indoor air comes in contact with the cold interior ceiling surface (the hotter the air, the higher it rises and more moisture it can hold), it will cook and condense. These types of condensation problems were often mistaken as roof leaks. This happens when there is insufficient insulation around the air duct and poor workmanship or aging insulation. Condensation accumulates in cold air (in summer) eventually dripping into the ceiling under the duct.

Please replace paragraph [0119] with the following paragraph:

[0119] (7) Structural Misalignment or Damage-In the case of less than perfect construction techniques, the trained observer can spot missing, mis-aligned or damaged internal structural members such as studs, headers, trimmers and the like. In some cases, those damaged or missing

members may contribute to otherwise unaccounted for interior damage that would normally point to foundation troubles, but which are, in fact, framing problems. FIGS. 24 and 25 are temperature profiles of wall internal components of a residential building. In FIG. 24, the thermal anomaly ~~31~~ 52 is indicative of a structural misalignment. In FIG. 25, the thermal anomaly ~~32~~ 53 is indicative of a structural misalignment. A review of the digital recording of the thermal profile shows an anomaly this is indicative of structure misalignment.

Please replace paragraph [0120] with the following paragraph:

[0120] (8) Wood Destroying Insect-Pests such as termites and even mouse and rat infestations have been recorded because of the telltale thermal discrepancies their respective environments provide. In the case of native termite species, these destructive pests require moisture in order to survive at high humidity levels. The thermal imaging system provides an additional tool for discovering the presence of termites and increases the detection of an active colony from about 30% (traditional inspection method) to at least 60%. This means that while the sensor system cannot detect 100% of all termite infestations, it can measurably double the chances of finding active colonies that have not been discovered through traditional inspection. FIGS. 26 and 27 are thermal profiles indicative of suspected termite infestation. More specifically, FIG. 26 shows to thermal anomalies ~~33~~ and ~~34~~ 54 and 55 indicative of suspicious wood destroying insect infestation. Similarly, FIG. 27 shows an anomaly ~~35~~ 56 indicative of wood destroying insect infestation. The presence of wood destroying insects can be confirmed by an acoustic scan. The protocol for an acoustic scan is set out in U.S. Serial No. 10/680,377 filed October 7, 2003.

Please replace paragraph [0121] with the following paragraph:

[0121] (9) Air Duct Leakage-FIGS. 28 and 29 show a temperature profile indicative of air duct leakage. In these temperature profiles, the anomalies ~~36~~ - ~~38~~ 57 - 59 are indicative of air leaking out of an air duct. The black is cold air leakage in the summer (in the winter it would be opposite).

Please replace paragraph [0124] with the following paragraph:

[0124] FIGS. 30 and 31 are temperature profiles indicative of moisture penetrating through cracks in a basement wall. More specifically, in FIGS. 30 and 31, anomalies ~~60~~ and ~~40~~ 61 and 70 are indicative of moisture on a basement wall.